



Memorandum

Date: February 16, 2022

To: Joanna Julian, Thompson Dorfman LLC

From: Lance Park, Senior Air Quality Scientist, FirstCarbon Solutions

Subject: Preliminary Air Quality Modeling Results for the Belvedere Mallard Pointe Project

This memorandum summarizes the preliminary air quality results of the Mallard Pointe Residential Project, which proposes to develop the approximately 2.8-acre site with 6 single-family homes, 3 accessory dwelling units, 10 duplexes, a 23-unit apartment building, approximately 30,200 square feet of parking and paved surfaces, and approximately 37,400 square feet of landscaped space. As demonstrated in this memorandum, the project would not result in a potentially significant impact related to air quality or greenhouse gas (GHG) emissions based on preliminary modeling results.

PROJECT CONSTRUCTION

Table 1: Construction Criteria Pollutant and Ozone Precursor Emissions

Metric	ROG	NO _x	PM ₁₀ (Exhaust)	PM _{2.5} (Exhaust)
Total Emissions (tons)	0.52	1.20	0.04	0.04
Total Emissions (lbs)	1,041	2,402	84	80
Average Daily Emissions (lbs/workday)	3.26	14.37	0.56	0.53
<i>Significance Thresholds (lbs/day)</i>	54	54	82	54
Project Exceeds Threshold?	No	No	No	No

Table 2: Construction Cancer Risks and Chronic Non-Cancer Hazards

Impact Scenario	Cancer Risk ¹ (risk per million)	Chronic Non-Cancer Hazard Index ²	TAC Concentration ³ (µg/m ³)
Project Construction	7.42	0.01	0.03
Thresholds of Significance	10	1	0.3
Exceeds Individual Source Threshold?	No	No	No





PROJECT OPERATION

Table 3: Operational Criteria Pollutant and Ozone Precursor Emissions

Metric	ROG	NO _x	PM ₁₀ (Total)	PM _{2.5} (Total)
Area	0.25	0.00	0.00	0.00
Energy	0.00	0.03	0.00	0.00
Mobile	0.12	0.11	0.25	0.07
Stationary	-	-	-	-
Total (Tons/Year)	0.37	0.15	0.26	0.07
BAAQMD Significance Thresholds (Tons/Year)	10	10	15	10
Exceeds Threshold?	No	No	No	No
Total Emissions (tons)	0.37	0.15	0.26	0.07
Total Emissions (lbs)	736.68	291.54	514.56	146.16
Average Daily Emissions (lbs/day)	2.02	0.80	1.41	0.40
BAAQMD Significance Thresholds (lbs/day)	54	54	82	54
Project Exceeds Threshold?	No	No	No	No

Notes: Note: All zeros displayed in the above table represent emission values which are below 0.005 tons per year and have subsequently rounded down. All true zero values are represented with "-". Stationary source emissions have not been modeled but would be negligible in comparison with other project operational emissions and would not cause an exceedance in significance thresholds.

Table 4: Greenhouse Gas Emissions

Metric	MT CO ₂ e/Year
Construction Emissions (Amortized over 30 years)	11
Area	1
Energy	61
Mobile	207
Waste	13
Water	6
Total	299
Significance Threshold (MT CO ₂ e/year)	660
Exceeds Threshold?	No



Thank you for the opportunity to prepare preliminary air quality and GHG emission results in support of your project's permit applications. Please feel free to contact Lance Park (805.535.5412 or lpark@fcs-intl.com) should you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'Lance Park', written in a cursive style.

Lance Park, Senior Air Quality Scientist
FirstCarbon Solutions
1350 Treat Boulevard, Suite 380
Walnut Creek, CA 94597